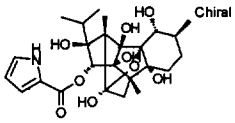
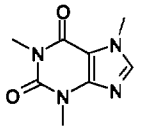
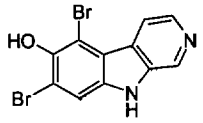
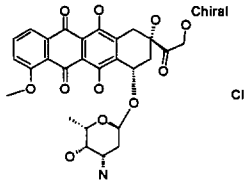
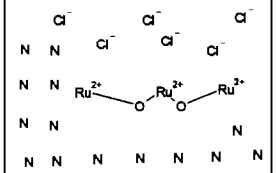
Ryanoids	Ryanodine		Inactive	Antagonist	Antagonist
Xanthines	Caffeine		Inactive	Agonist	Agonist
Eudostomins	Bromoeudistomin D		Not tested	Agonist	Not tested
Antraquinones	Doxorubicin		Not tested	Inactive	Inactive
Polycationic reagents	Ruthenium Red		Displacer	Inactive	Antagonist

Table 7

Data For Selected Anthranilamide Analogs (as shown in Figure 2)
Tested in Radioligand Displacement and Calcium Release Assays

Molecule	R1	R2	R3	R4	R5	Assay Type		
						Displacement IC_{50} (nM)	Calcium Release Threshold (nM)	
						P. americana	*P. americana*	*D. melanogaster*
Group 1								
Cpd 1	isopropyl	H	CH3	CF3	F	< 300	< 1000	< 300
Cpd 2	isopropyl	H	CH3	CF3	Cl	< 300	< 300	< 300
Cpd 3	isobutyl	Br	CH3	CF3	Cl	< 300	Not tested	Not tested
Cpd 4	isopropyl	Br	CH3	CF3	F	Not tested	Not tested	Not tested
Group 2								
Cpd 5	isopropyl	H	CH3	CF3	Cl	< 300	< 300	< 300

Cpd 6	CH3	H	CH3	CF3	Cl	< 300	< 300	Not tested
Cpd 7	isopropyl	H	CH3	Br	Cl	< 300	< 300	Not tested
Cpd 8	isopropyl	H	CH3	Cl	Cl	< 300	< 300	Not tested
Cpd 9	isopropyl	Br	CH3	CF3	Cl	< 300	< 300	Not tested
Cpd 10	isopropyl	Cl	CH3	CF3	Cl	< 300	< 300	Not tested
Cpd 11	CH3	Cl	CH3	CF3	Cl	< 300	< 300	< 300
Cpd 12	isopropyl	Br	CH3	Br	Cl	< 300	< 300	Not tested
Cpd 13	isopropyl	Cl	CH3	Br	Cl	< 300	Not tested	Not tested
Cpd 14	CH3	Cl	CH3	Br	Cl	< 300	< 300	< 300
Cpd 15	CH3	Br	CH3	CF3	Cl	< 300	< 300	Not tested
Cpd 16	isopropyl	Cl	CH3	Cl	Cl	< 300	< 300	< 300
Cpd 17	CH3	Cl	CH3	Cl	Cl	< 300	< 300	Not tested
Cpd 18	CH2CH3	Br	Br	CF3	Cl	< 300	Not tested	Not tested
Group 3								
Cpd 19	isopropyl	H	Cl	CF3	CH3	< 3000	< 10000	< 10000
Cpd 20	isobutyl	H	Cl	CF3	CH3	Not tested	Not tested	< 3000
Cpd 21	isopropyl	H	CH3	CF3	CH3	Not tested	Not tested	< 3000

EXAMPLE 10

Roach Muscle Membrane Preparation

The procedure for preparation of membranes from cockroach femoral muscle for radioligand binding studies was essentially as described by Schmitt, et.al. (1996) *Pesticide Science 48*:375-385. A brief description of the steps involved is as follows:

Mid and hind legs from 6-9 week old cockroaches were excised and immediately placed in liquid nitrogen. Excised legs could be stored at –80 °C for several months, if necessary, prior to further fractionation. Typically, membrane preparations started with approximately 55 g (wet weight) of excised legs. All subsequent steps were carried out at 4°C.

50 mM Tris-HCL, pH 7.4 was added at a ratio of 9 ml buffer to 1 g (wet weight) of legs. The legs were homogenized on ice using a Polytron (Brinkmann Instruments, Westbury, NY) for 2 min at Setting #3. In order to remove all fragments of cuticle, the homogenate was first passed through two layers of cheesecloth and then through one layer of glass wool overlaid on two layers of cheesecloth. On occasion, the cheesecloth clogged with particulates prior to passing all material through. In such cases, fresh cheesecloth (and glass wool) was used for the remainder of the suspension. The filtrate was collected in 50 ml centrifuge tubes and centrifuged in a Sorvall SS-34 rotor at 1,950 x g_{max} for 20 min. The supernatant was collected and centrifuged for 30 min at 30,000 x g_{max}. The